WORLD HEALTH ORGANIZATION

ORGANISATION MONDIALE DE LA SANTE

REGIONAL OFFICE FOR THE WESTERN PACIFIC
BUREAU RÉGIONAL DU PACIFIQUE OCCIDENTAL

REGIONAL COMMITTEE

Forty-first session
Manila
10-14 September 1990

Provisional agenda item 10

WPR/RC41/7

6 July 1990

ORIGINAL: ENGLISH

ERADICATION OF POLIOMYELITIS IN THE REGION: PROGRESS REPORT

In view of the acceleration of the Expanded Programme on Immunization (EPI), increasing immunization coverage with three doses of trivalent oral poliovirus vaccine ($TOPV_3$) and the rapidly decreasing incidence of poliomyelitis, the Regional Committee at its thirty-ninth session in September 1988 adopted a resolution on eradication of poliomyelitis by 1995. This progress report provides information on the activities undertaken for poliomyelitis eradication during the past two years.

1. INTRODUCTION

Activities for poliomyelitis eradication were initiated in the island countries and areas of the South Pacific in 1986. Active surveillance of acute flaccid paralysis in children was promoted and investigations of cases were carried out. These activities received further impetus and support through the EPI Managers' Meetings held in Manila in 1986 and 1988. The Regional Director, in his report to the Regional Committee at its thirty-eighth session in September 1987, indicated the possibility of Pacific island countries and areas becoming poliomyelitis-free by 1990.

In May 1988, the Forty-first World Health Assembly adopted a resolution on the global eradication of poliomyelitis by the year 2000.

In June 1988, a regional workshop of EPI managers reviewed the successful acceleration of the Programme, the increasing coverage with $TOPV_3$, and the decreasing incidence of poliomyelitis. They concluded that poliomyelitis in the Region could be eradicated by the year 1995.

In view of these global and regional developments, the Regional Committee, at its thirty-ninth session in September 1988, adopted resolution WPR/RC39.R15 on poliomyelitis eradication in the Region by the year 1995.

2. PRESENT EPIDEMIOLOGICAL STATUS

For the Region as a whole, coverage with $TOPV_3$ is 90%. Although coverage with $TOPV_3$ in the developed, newly industrialized and South Pacific countries and areas is over 90%, it varies as follows in the six countries where poliomyelitis is still endemic: in China it is 95%, in the Lao People's Democratic Republic 22%, in Papua New Guinea 52%, in the Philippines 78%, and in Viet Nam 89%, as of 1989 (see Table 1). Figures from Cambodia are not available.

In 1980 the incidence rate of poliomyelitis in the Region was 0.92 per 100 000 population, and in 1986 it had decreased to 0.22. The incidence was further reduced to 0.13 in 1988. Especially good results have been achieved in Malaysia and the Republic of Korea, where after a steady decrease in poliomyelitis incidence, zero cases have been reported for the past five years. A steadily decreasing trend is reported by China, Papua New Guinea and the Philippines. However, incidence in the Lao People's Democratic Republic and Viet Nam still follows an endemic pattern, and epidemics continue to occur (see Table 2).

Seventeen countries and areas in the Region have had zero cases of poliomyelitis for more than a decade; 8 have not had cases for the last 4-12 years, and 4 have reported occasional single cases, presumed to be vaccine-associated or imported.

Thus the two main positive trends are a steadily decreasing overall incidence since 1980, and an increasing number of countries reporting zero cases.

In 1989, provincial-level monitoring of $TOPV_3$ coverage and the incidence of poliomyelitis was initiated. This will make it possible to improve epidemiological analysis and institute corrective measures according to local needs. For example, in Viet Nam in

1987 and 1988, poliomyelitis incidence was confined mostly to the southern and, to a lesser extent, the central regions, where it was five times as high as in the north. This distribution of incidence correlates well with the levels of immunization coverage. The same phenomenon is seen in China and the other countries in which poliomyelitis is endemic. A higher incidence of poliomyelitis indicates low immunization coverage in pockets consisting of one or two districts or counties.

3. PRESENT PROGRAMME ACTIVITIES

3.1 Regional level

3.1.1 Plan of action

In response to resolution WPR/RC39.R15 on poliomyelitis eradication in the Region by 1995, a regional plan of action was prepared and finalized in early 1989. This was sent to all the Member States in the Region, calling upon them to act as necessary and to develop national plans of action.

In terms of immunization coverage, incidence of poliomyelitis and the development of surveillance systems, the countries and areas of the Region can be classified as follows as of June 1990:

Stage A: Existence of reliable reporting systems, zero indigenous cases due to wild poliovirus for the last three years and $TOPV_3$ immunization rates of over 80%.

American Samoa, Australia, Brunei Darussalam, Cook Islands, Fiji, French Polynesia, Guam, Hong Kong, Japan, Kiribati, Macao, Malaysia, Marshall Islands, Federated States of Micronesia, Nauru, New Caledonia, New Zealand, Niue, Northern Mariana Islands, Palau, Republic of Korea, Samoa, Singapore, Solomon Islands, Tokelau, Tonga, Tuvalu, Wallis and Futuna

Stage B: Reporting less than 10 cases with immunization coverage rates of over 50%, and developing active surveillance.

Vanuatu

Stage C: Reporting more than 10 cases with immunization coverage rates of over 50%, and developing active surveillance.

China, Papua New Guinea, Philippines, Viet Nam

Stage D: Reporting more than 10 cases with immunization coverage rates of less than 50%, and developing active surveillance.

Cambodia, Lao People's Democratic Republic

3.1.2 Immunization coverage

Owing to the acceleration of the Expanded Programme on Immunization, most of the countries in the Region are attaining immunization coverage of over 80% for $TOPV_3$. However, except in the case of the industrialized countries, this 80% coverage was usually attained only recently, and the coverage of children 1-4 years old or older still remains low, leaving a backlog of unimmunized children. Therefore, in these countries, activities have been initiated to provide immunization for those older children through a one-time campaign or during containment activities.

In countries whose immunization coverage is still under 50%, an immunization campaign for poliomyelitis is being introduced, in addition to the acceleration efforts of the Expanded Programme on Immunization. In the Lao People's Democratic Republic, "Polio Immunization Days", involving teachers and students through the Ministry of Education, are being successfully carried out, and have been increasing immunization coverage since 1989.

3.1.3 Active surveillance and investigation

Active surveillance for cases of acute flaccid paralysis and their prompt investigation is one of the most critical components of the eradication strategies. The resolution on eradication urged Member States to intensify active surveillance so that cases of poliomyelitis were identified and investigated promptly; and to initiate containment activities. It also urged Member States to report cases at national and international levels. However, a number of countries are not submitting a monthly report on communicable diseases. At present this component is the weakest and will have to be strengthened if eradication is to be achieved.

In countries where poliomyelitis is endemic systems are being developed to ensure active surveillance, prompt reporting, prompt investigation and prompt response to reports of acute flaccid paralysis in children under 15. In some countries it may take up to two years to make the system efficient. To hasten this process, training of health workers has been initiated at all levels, together with activities to increase community awareness.

3.1.4 Vaccine

All countries in the Region except two are using trivalent oral poliovirus vaccine which conforms to WHO requirements. In China and Viet Nam, domestically produced oral poliovirus vaccines which do not conform to WHO requirements have been used. In both these countries, efforts have been made to upgrade the quality of vaccines through technical cooperation with WHO. Further efforts by WHO will be required to provide continuous technical cooperation as well as donor coordination for the improvement of vaccine manufacturing facilities. French Polynesia is the only country in the Region which is using inactivated poliovirus vaccine.

In China, the Lao People's Democratic Republic, Papua New Guinea, the Philippines and Viet Nam, the demand for vaccine is expected to increase rapidly through increased coverage achieved by regular immunization and outbreak containment activities. WHO will cooperate with these countries to ensure that the increased demand is met.

3.1.5 Laboratory

With some additional technical support, China, the Philippines and Viet Nam will achieve self-reliance in making serological or virological diagnoses of poliomyelitis. WHO consultants visited these countries in 1989 and 1990, reviewed their capabilities and initiated requirements for upgrading the laboratories. In June 1990 a training course was held on the

laboratory diagnosis of poliomyelitis, oral poliovirus vaccine potency testing and the standardization of procedures. The participants came from countries which have the potential for carrying out laboratory procedures. This training course was based on recently developed WHO manuals on these subjects.

3.1.6 Training

Since most of the health workers engaged in the Expanded Programme on Immunization in the Region have had basic training in immunization procedures, the primary focus of training in the Region will be on epidemiological surveillance, disease reporting, investigations and outbreak control.

The first training course to use the newly developed poliomyelitis eradication manual was held in China in August 1989. Subsequently, four similar training courses were conducted in China, one in the Lao People's Democratic Republic, three in Viet Nam and one in Papua New Guinea. In addition, two consultative workshops were held in the Philippines. To supplement the existing field guide and the manual, more specific material for peripheral workers was developed by the Regional Office. These training materials are being translated into the vernacular in China, the Lao People's Democratic Republic and Viet Nam.

3.1.7 External support coordination

Although the Regional Office has been providing Member States with technical support, the eradication of poliomyelitis calls for substantial resources in addition to those already available for the acceleration of immunization activities. Therefore, the Regional Office has been working with Member States to coordinate and increase donor support. In the Region, WHO has been collaborating with UNICEF, Rotary International, the Japanese Government and the Canadian Public Health Association to provide additional resources.

3.2 National level

3.2.1 Plan of action

After the adoption of the regional resolution, national plans of action for poliomyelitis eradication were prepared in collaboration with WHO field staff or consultants in China, the Lao People's Democratic Republic, Papua New Guinea, the Philippines and Viet Nam. In Cambodia, a National Plan of Action for EPI acceleration has been prepared and is being implemented. On the basis of these plans, coordination between these countries and the Regional Office, as well as between possible donors, was initiated. This dialogue has resulted in additional contributions to China, the Lao People's Democratic Republic, Papua New Guinea and the Philippines. Negotiations for additional contributions to Viet Nam are in progress and are expected to be finalized by October 1990. As soon as circumstances permit, similar negotiations will be undertaken for poliomyelitis eradication in Cambodia.

In Cambodia political changes have interrupted WHO collaborative activities, and reliable immunization coverage figures and disease incidence rates are not yet available. However, there is enough information to show that poliomyelitis is endemic in Cambodia. Unless eradication can begin soon, Cambodia may become the only country in the Region with endemic poliomyelitis. A substantial amount of resources will be required to initiate and accelerate activities when the opportunity arises.

China, after the EPI Managers' Workshop in June 1988, developed a national policy for poliomyelitis eradication, and a WHO-China cooperative project started in 1988. Although the reported number of cases of poliomyelitis increased greatly in 1989, mainly

because of several large outbreaks, this increase in the figures can be interpreted as an outcome of the strengthening of the surveillance system. Additional external support from Rotary International has been received after almost three years of negotiation between WHO, the Government and Rotary International.

The Lao People's Democratic Republic, in spite of its weak infrastructure and economic difficulties, started acceleration of EPI activities in 1988 and poliomyelitis eradication activities in 1989. The strategy of holding immunization days through the school system has been employed with success in several provinces. New external support, coordinated by WHO, was obtained from Rotary International and JICA.

Papua New Guinea has also started to strengthen surveillance for poliomyelitis and conducted investigations of suspected cases of poliomyelitis. A training course on poliomyelitis eradication was also conducted. Papua New Guinea continues its efforts to increase overall immunization coverage. It has initiated a yearly social mobilization week to increase awareness and highlight the benefits of immunization.

The Philippines has emphasized strengthening surveillance for poliomyelitis eradication and further increasing immunization coverage with TOPV. Through the two consultative workshops held in 1989 and 1990, ways and means of strengthening surveillance for poliomyelitis were discussed. Immunization coverage with TOPV in the Philippines has been increasing steadily, but in urban areas it is lower than the average national coverage. Once a year, additional campaigns have been implemented to increase immunization coverage in large cities, with local support for social mobilization and logistics provided by Rotary Districts. This cooperation between Rotarians, the Department of Health and the Mayors, with technical input from WHO, has increased the coverage in the last two years to over 60%.

Viet Nam has also embarked on poliomyelitis eradication, together with intense acceleration of the Expanded Programme on Immunization, which started in 1989. In addition to providing training to strengthen the surveillance and reporting system, it has taken steps to improve the quality of TOPV to comply with WHO standards. Negotiations are going on with Rotary International, UNDP and the French Government for support for the Expanded Programme on Immunization and poliomyelitis eradication.

3.2.2 Countries with no reported cases of poliomyelitis

In the South Pacific active surveillance on the basis of hospital records has been conducted in 12 countries and areas by a WHO consultant. None of the recorded neurological conditions were compatible with a diagnosis of poliomyelitis. In island countries where no cases of poliomyelitis have been reported for more than ten years in spite of low coverage with TOPV until recently, the definition of a poliomyelitis case for reporting purposes should include susceptible adults. To identify susceptibles, serological surveys of a portion of the population of all age groups were conducted in Fiji and Tonga in 1990. Additional financial support to several of the countries was provided by the Canadian Public Health Association, Rotary International and the Save the Children Fund (Australia), to accelerate and maintain immunization coverage. The Australian International Development Assistance Bureau (AIDAB) has provided funds to WHO for the provision of an epidemiologist to increase technical cooperation in these island countries.

Most of the developed countries in the Region have high immunization coverage and a good surveillance system for poliomyelitis and infectious diseases in general. The newly industrialized countries and areas have also achieved high immunization coverage and poliomyelitis-free status. These comprise Brunei Darussalam, Hong Kong, Macao, Malaysia, the Republic of Korea and Singapore.

4. PROSPECTS

As noted above, poliomyelitis incidence in the Western Pacific Region has shown a decreasing trend. However, in the countries with endemic poliomyelitis, its incidence is still fluctuating in spite of the steady increase in immunization coverage. For example, in China, several outbreaks have taken place since the beginning of 1989. Although China has achieved a remarkably high immunization coverage at the provincial level, these outbreaks have taken place in counties or pockets with low coverage. The biggest outbreak involved more than 500 suspected clinical cases in one county. Some of the causes of this big outbreak were low immunization coverage (40%), lack of an appropriate surveillance system and a delay in reporting the outbreak and initiating containment measures. A similar situation is found in other countries in which poliomyelitis is endemic. This outbreak is a good lesson for future activities in poliomyelitis eradication.

All the countries in the Region, especially five of the six in which the disease is endemic, have expressed their firm commitment to poliomyelitis eradication. Major efforts will be required to achieve and sustain (1) high immunization coverage, training and surveillance; (2) prompt reporting of suspected cases and initiation of containment measures; and (3) donor coordination and the contribution of additional resources for the countries with endemic poliomyelitis.

Table 1. Progress of immunization coverage with the third dose of trivalent oral poliovirus vaccine ($TOPV_3$) in five countries from 1982 to 1989

Country	Progress of immunization coverage with $TOPV_3$ (%)							
	1982	1983	1984	1985	1986	1987	1988	1989
1. China	80	81	78	76	68	78	96	95
2. Lao People's Democratic Republic	4	8	24	25	6	10	17	22
3. Papua New Guinea	27	27	32	34	42	44	48	52
4. Philippines	50	58	54	61	55	73	74	78
5. Viet Nam	2	2	5	62	45	51	70	89

Table 2. Incidence of poliomyelitis in five countries from 1982 to 1989

Country	Incidence of poliomyelitis (Number of cases)							
	1982	1983	1984	1985	1986	1987	1988	1989
1. China	7741	3296	1626	1537	1844	969	667	4628
2. Lao People's Democratic Republic	46	24	13	523	182	480	154	91
3. Papua New Guinea	18	8	18	9	24	4	20	26
4. Philippines	440	355	740	533	375	236	440	230
5. Viet Nam	897	1109	1158	1600	940	1449	839	147
Total	9142	4792	3555	4202	3365	3138	1752	5122

NOTE: Figures in Tables 1 and 2 are based on the latest information received by the Communicable Diseases Unit as of May 1990.